## GENERAL NOTES.

Further Notes on the "Fishy" Flavor of Birds.—Since publishing on this subject in the last issue of 'The Auk' (October 1918, pp. 474-6), the writer has been favored by correspondents with various valuable items. These are presented under appropriate headings selected from the conclusions of the former paper.

1. Certain individual birds of species not habitual fish eaters have their flesh tainted by a flavor which popularly is called "fishy." Mr. C. H. Young, of the Canadian Geological Survey, reports according to Mr. P. A. Taverner, that last spring at Shoal Lake, Manitoba, he shot two Golden Plover, which upon trial proved to be so "fishy" as to be almost uneatable. The two persons who ate them both became ill afterwards, while four or five others participating in other parts of the same meal were unaffected. Mr. Taverner states that a stew made from two Canada Geese killed on Red Deer River July 1917 was strongly fishy. Mr. Taverner again, "A batch of Semipalmated Sandpipers killed on the tidal mud flats on Miscou Island, in spring of 1914 were so fishy as to be edible only when other meat was lacking." Also "Juvenile Harlequin ducks raised on and never off from a small fishless lake in Jasper Park were so fishy as to be inedible." (This point is mentioned in (The Canadian Alpine Journal), Vol. IX, 1918, p. 63).

2. Habitual fish-eating birds do not necessarily taste fishy.

Loon. Average proportion of fish in diet 80%. Summer 1918. Tried an old bird, found it tough and not attractive in flavor but without trace of fishiness. (Tayerner.)

Herring Gull.— Fish in diet, 54%. The fishermen of Nova Scotia eat a great many. (Dr. L. C. Jones.) An immature Herring Gull taken at Miscou Island in May was strongly fishy, but the inhabitants of the shores of the Gulf of St. Lawrence regard young summer and fall birds as great delicacies. (Tayerner.)

Double-crested Cormorant. — Fish in diet, almost 100%. Dr. C. W. Townsend says: "The last time I was in Labrador I ate a Double-crested Cormorant, whose stomach was filled with fish, and found it delicious without a trace of fishy flavor. . . . The Cormorant almost melted in one's mouth, and although I could not induce the two sailors to touch it, the Captain, much to his surprise, found it good."

Hooded Merganser.— Fish in diet, 25%. Ned Hollister states that these birds are regularly shot and eaten at Delavan Lake, Wisconsin, being as well flavored as any of the ducks killed there. In his family they were preferred to Bluebills.

Bittern.— Fish in diet, 15%. Both adult and young are very delicate and tasty. Not as hearty as the larger Herons, almost equal to Partridge (Ruffed Grouse) but less dry. (Taverner.)

Great Blue Heron.— Fish in diet, 55%. J. Josselyn in his 'Two Voyages to New England' states that the finest game the colonists found was the Great Blue Heron. I have tried it and in flavor it is much like the Scoters, but the meat is much finer grained and very rich in fat. (Jones.) Adult is rather tough but of very fine flavor, a hearty meat more like beef than that of a bird. Juvenile, tender and more delicate. I regard this bird as the finest wild bird I have ever eaten under camp conditions. Tried it fried, broiled, and stewed. (Taverner.) Have found the young bird in the first autumn delicious eating. (Witmer Stone.)

Green Heron. Fish in diet, 40%. Very good, a little more delicate than the Night Heron. (Taverner.)

**Black-crowned Night Heron.**—Fish in diet, 40%. Very good, not quite as hearty as the Great Blue Heron. (Taverner.)

Mr. Taverner also reports that at Perce in 1914 and 1915 he tested Puffins, Murres and Razor-billed Auks, birds which make fish about 60% of their diet, and found all of them delicious.

In considering evidence on this subject it is necessary to distinguish clearly between a true fishy taste and the much more common merely strong or rank flavor. They are commonly confused. It has been suggested that fishy flavor may be due to a diet of mollusks rather than of fish, but in the writer's opinion this theory will no more bear searching analysis than the other. For instance Scoters and Eiders, almost exclusive mollusk feeders along the New England coast, are not fishy in flavor, and may easily be made into good dishes as the writer knows from experience. Robin Snipe collected on Wallops Island, Virginia, in spring and found to be feeding exclusively on small mussels, were not at all fishy, in fact were as good as any of the other shorebirds. In considering the effect of food upon flavor it is necessary also to recognize a certain specificity in flavor. For instance, in the corn belt hogs and cattle are kept under identical conditions and have with only minor exceptions the same foods; yet there is no chance of confusing the pork and beef they yield. Somewhat the same case is that of guinea fowl and chickens reared upon the same diet, but in flavor very easy to distinguish.

The writer does not wish to be understood to believe that food does not influence flavor. Remarks by correspondents indicate that they got an impression to this effect from the previous contribution, just what an effort was made to avoid. The Spruce Grouse and the Sage Hen, for instance, are two striking examples among American birds of food controlling flavor. The points chiefly emphasized are that fish-eating does not necessarily cause fishy flavor, and that the latter does exist in individual birds that in all probability have not acquired it by eating fish. In the light of the evidence the writer holds neither of these points is subject to dispute.—
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Egrets (Herodias egretta) in Northern New Jersey.— On August 4, 1918, two Egrets (Herodias egretta) were seen by the writer at a small